

## VZ-200 BUG

To the VZ-200 hackers among us this short series of program statements crashes the VZ-200 (Version 2.0).

```
10 N=1 : INPUTS : FOR
P=1 TO S : N=N*
P/(P+1) : ? N : NEXT :
```

RUN  
INPUT 23 twice and the second time round the machine goes crazy.  
W Tritscher

*P.S. If you pay me for the above, keep it and send it to the person who provides the ROM-patch routine.*

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## GROUP ONE

This month we would like to bring your attention to some bugs in the Microsoft Basic interpreter as included in the Model I. Users of the CoCo and VZ200 might like to try and see if these bugs are also present in their computers.

Firstly, there is a problem with BASIC's handling of the "raise to the power" function. Enter the following program into your computer and 'RUN' it:—

```
10 FOR X=1 TO 15
20 PRINT 2^X
30 NEXT
```

The resultant printout will be as follows:—

```
2
4
8
16
32
64
128
256
512
1024
2048
4096
8192.01
16384
32768
```

Whilst the above problem probably won't occur all that often, it is a good idea to be aware of it. The same applies to the following bug.

RND(X) can return a value of X+1 when X is a power of 2. In cases where RND(0) is just under the value of one, when multiplied by X, the product is rounded and this is where the problem occurs. For instance, A=RND(16) can return a value for A of 17. To get around this, use the following:—

```
10 A=RND(16) : IF A > 16
THEN 10
```

## VZ bug

I hope you haven't completed a review of the Dick Smith VZ-300 because it has a bug in the firmware (the same as the VZ-200).

If one RUNs, (then INPUTs 29), the following series of statements, the computer will crash.

```
10 N=1 : INPUTS : FOR
A=1 TO S : N=N+
1/(1+A) : ? N :
NEXT : RUN
```

I first became aware of this fault at the 4th APC Show held at Centrepoin in Sydney earlier this year and informed Dick Smith.

However, when I repeated the test on a new VZ-300 the results were the same. Dick Smith is therefore selling the VZ-300 with bugs.  
W Tritscher

Australian Personal Computer Page 31

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Micro-80 4(8) Aug. 84 p 3-4.

The next bug can be found if you try and use the expression PRINT VAL ("%") in your program. Whenever you have a % sing in a string to be converted by VAL you will get a syntax error. This bug also appears in the Model III ROM. To avoid this error in Disk Basic use the following routine:—

```
1000 I=INSTR(X$,"%")
1010 IF I THEN X=VAL
(LEFT$(X$,I-1)) ELSE
X=VAL(X$)
```

Non-disk users should use the following:—

```
1000 FOR I=1 TO LEN(X$)
1010 IF MID$(X$,I,1) = "% "
THEN 1040
1020 NEXT I
1030 I=LEN(X$)+1
1040 X=VAL(LEFT$(X$,I-1))
```

This final bug also appears in all versions of the 'Level II' ROM. Enter the following program and 'RUN' it:—

```
10 INPUT A#
20 A#=INT(A#)
30 PRINT A#
```

If you were to enter -56320 in answer to the prompt, the computer would come back with a result of -56576. To explain, when taking the INT function of a double-precision number which is evenly divisible by 256 and is less than -32768 one extra bit is turned on when processing the number which is subsequently reduced by 256, 512 or some other power of 256. To avoid this add the following filter to your program:—

```
100 A#=SGN(A#)
*INT(ABS(A#))
```

The first bug was mentioned originally in '80-US'. The rest of these bugs were first mentioned in 'The Alternate Source'.